Remarks

The Examiner has rejected claims 1 and 3 under 35 U.S.C §112, first paragraph, as failing to comply with the written description requirement. The Examiner has rejected claims 1 to 3 under 35 U.S.C. §102(e) as lacking novelty over the previously cited Chuah et al. patent (Chuah).

The Examiner is correct that portions of the description refer to sending acknowledgement signals when messages are successfully received. In the applicant's attorney's copy of the specification, these portions are on page 4, lines 26 to 27, which read "message 78 is successfully received, and an acknowledgement 80 is sent from the network on FACH", and page 5 lines 1 to 2, which read7 "...which puts the positive acknowledgement 80 onto the FACH."

These portions are, however, a reference to prior art, not the present invention, see for example the statement "Turning now to the invention," on page 5, line 7 of the applicant's attorney's copy of the specification, which implies this. For explicit confirmation, note also, page 1a, lines 28 to page 2, line 6 of applicants' attorney's copy of the specification, which states:

> "In the accompanying drawings, the prior art is illustrated in figures 1 – 7 in which:-
> Figure 1 is a schematic diagram of a part of a radio telecommunications system;
> Figure 2 illustrates a physical random access channel slots structure;
> Figure 3 illustrates the structure of a random access transmission;
> Figure 4 illustrates the structure of an access burst from a mobile;
> Figure 5 illustrates the message part of the random access burst;
> Figure 6 illustrates the layers involved in message acknowledgement and
> Figure 7 illustrates how random access acquisition indication and forward access channels interact to acknowledge preamble and message signals from a mobile.
> The invention will be described with reference to figures 8 and 9 in which :-
> Figure 8 illustrates how the random access and acquisition indication

channels interact to acknowledge preamble and message signals from a mobile; and

Figure 9 illustrates the new message route. "

Those passages on page 4 lines 26 to 27 and page 5 lines 1 to 2 of the applicants' attorney's copy of the specification, and the reference numerals 78, 80 there referred to, relate to Figure 7 referred to as prior art in the above passage.

We now address the question of where the application teaches the claim feature "but if the message is acceptable not sending a positive acknowledgement signal" (emphasis added). Here the Examiner is referred to the passage on page 5, lines 7 to 20 of applicants' attorney's copy of the specification. These are the final four paragraphs of the description, and state:

"Turning now to the invention, Figure 8 shows similar integers to Figure 7, advanced by 100, and actions 1 to 11 occur as in the prior art, integers 160 to 168. However, when the corrupted message 168 is received, a negative acknowledgement 171 is sent to the MS12 by the BTS 18, and actions 5 to 11 are repeated. If there is no negative acknowledgement 171, the MS 12 assumes that the RACH transmission has been successful.

Figure 9 illustrates that, with application of the invention, the longer route to the BSC 20 and its layer L2 is no longer involved, and thus considerable time is saved.

Further, since a negative acknowledgement message 171 is sent only in the relatively rare case of a corrupted message, traffic volume over the air interface is reduced. Also, sending the signal 171 avoids the time-out present in the prior art arrangement.

While the AICH could be arranged to send positive acknowledgement signals after CRC checking of a message, the advantage of a reduction in traffic volume would then not be achieved."

In this passage, the Examiner is referred in particular to page 5, lines 10 to

12, which state "If there is no negative acknowledgement, the MS 12 assumes that the RACH transmission has been successful" (emphasis added); and also to page 5, lines 15 to 20 within that passage.

Within page 5, lines 15 to 20, it is stated on lines 15 to 17: "Further, since a negative acknowledgement message 171 is sent only in the relatively rare case of a corrupted message, traffic volume over the air interface is reduced". The skilled reader understands this reduction to be because positive acknowledgements are not sent, hence the mobile station (MS12) assumes the RACH transmission has been successful (page 5 lines 10 to 12). This is confirmed by page 5 lines 18 to 20 which states "While the AICH could be arranged to send positive acknowledgement signals after CRC checking of a message, the advantage of a reduction in traffic volume would then not be achieved." (emphasis added).

In view of the above, it will be seen that the present application as filed includes clear teaching of the present invention.

Basically, according to the present invention as defined by claims 1 and 3, after power ramping using preambles, the base station sends a negative acknowledgement if a message was received corrupted, but does not send an acknowledgement of the message if the received message was acceptable.

This is in contrast to the system described in Chuah in which all successfully received messages are acknowledged by the base station sending a positive acknowledgement, see Chuah: Figure 5, references 504, 506, 508; Figure 7, references 704, 706; and column 8, lines 12 to 16.

Specifically, Chuah teaches in its Figure 5 reference 508 and column 8, lines 12 to 16, a "correct reception" message being transmitted by the base station (column 8, line 13) if the signal is above a detection threshold level DTHRESH1 (see column 8, lines 3 to 4) and the Cyclic redundancy code (CRC) is found valid.

As regards the Examiner's objection under 35 U.S.C §102(e) against claim 3 specifically, it should also be noted that Chuah Figure 7 shows what happens in a remote terminal (rather than a base station, see column 5, lines 51 to 53) and this includes transmission of positive acknowledgements, see query box 704 in Figure 7 which indicates: Was "Correct Reception" message received?

It follows that present claims 1 and 3 are patentably distinguished over

Chuah

As previously mentioned in systems according to the present invention of claims 1 and 3, if no negative acknowledgement is received then correct reception is assumed. This is advantageous as there is less acknowledgement traffic volume than if positive acknowledgements were also sent.

Furthermore, the present invention is particularly advantageous in embodiments where messages are only relatively rarely corrupted. Then there is much less acknowledgement traffic in sending only negative acknowledgements (indicating corrupted messages are received by the base station) rather than positive acknowledgements (indicating successful reception of messages by the base station). This, of course, may have consequential advantages in freeing up network resources for other traffic.

Claim 2 is acceptable not least on the basis that it depends on an allowable claim 1.

In view of the foregoing, allowance of the amended claims and passage to issue of the subject application is respectfully requested. If the Examiner should feel that the application is not yet in a condition for allowance and that a telephone interview would be useful, he is invited to contact applicants' undersigned attorney at 973, 386-8252.

Respectfully submitted,

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